

INTRODUCTION

The chapters of this book have evolved from original papers presented at an international conference organised in Lisbon, May 2013, as the closure of an FCT-funded research project, *TKB: a Transmedia Knowledge-base for performing arts*, conceived of and directed by myself. TKB¹ was a transdisciplinary project seeking to provide a research space for rigorous, critical exploration of the intersections between language, body movements, cognition and digital media in the performing arts.

Under the title *Multimodal Communication: Language, Performance and Digital Media*, this conference has provided a multidisciplinary forum for researchers from various disciplines and artists interested in the study and documentation of performing arts (with a focus on contemporary theatrical dance and performance), as well as in issues of multimodality in human communication and in human-computer interaction, particularly regarding video annotation tools and digital platforms for cultural heritage preservation. To my knowledge, this has been the first conference at an international level to explore these unexpected, yet rather productive crossings.

Face-to-face communication is by nature multimodal, involving speech, gestures, prosody, facial expressions, head nods or full-body movements, and multimodal communication as an established research area is growing rapidly. There is surely an increased interest in embodied and situated communication, in how humans interact with each other using different modalities, and in how technological artefacts affect communicative activities and respective contexts. Moreover, the more recent increase in the use of the term “multimodality” in fields such as artificial intelligence, design, media studies and conversation analysis, clearly denotes a growing interest in the bodily aspects of language and communication, an interest which has always been present in the daily practices of performing artists in the first place! Indeed, the high awareness that contemporary choreographers and dancers have of complex questions, such as the embodied mind or the inseparability of language from gestures, was the trigger for my decision to organise this conference and edit the present book. The performing arts often mirror daily life

¹ <http://tkb.fcsh.unl.pt/content/introduction-tkb-project>: accessed 16 March 2016

actions and routines, thus providing a rich corpus for the analysis of human body movements and emotions, turn-taking management or decision-making in groups, for instance. They make a recurrent use of speech simultaneously with body movements and, being theatrical, they highlight expressiveness, therefore contributing to an easier recognition of relevant features for research.

At the time of our conference in Lisbon, in 2013, the first volume of *Body - Language - Communication: an International Handbook on Multimodality in Human Interaction*, edited by Cornelia Müller et al., was just about to come out. Together with its second volume, published one year later, this handbook has become a reference work on how body movements relate to language and communication. It presents current multidisciplinary, historical, theoretical and methodological aspects of the state-of-the-art on how body movements are used for communication around the world. The case of Portugal is covered in volume 2, chapter VII, dedicated to “Gestures across cultures”, with the paper “Gestures in Southwest Europe: Portugal”. The TKB project is also mentioned there as an initiative towards the integration of gesture studies in dance analysis and documentation through the creation of an annotated digital archive for contemporary dance, funded at national level, and therefore fostering the study of multimodality in language and in the performing arts in Portugal.

Since the TKB conference on *Multimodal Communication: Language, Performance and Digital Media*, several other events have taken place, or are being organised at the time of writing, in which the conjunction of language, cognition and the performing arts has been under scrutiny. Important examples include the conference on *Cognitive Futures in the Humanities* (Durham, April 2014), where a thematic session was fully dedicated to “Theatre and Performance”; the forthcoming *Conference of the Association for Researching and Applying Metaphor* (RaAM), which will focus on *Metaphor in the Arts, in Media and Communication* (Berlin, July 2016), intending to go beyond the scope of solely language-based discourse; and the well-established *Conference of the International Society for Gesture Studies* (ISGS), which will be entirely dedicated to *Gesture, Creativity and Multimodality* (Paris, July 2016). Taking such relevant events into account, one can only rejoice at the rising interest in the study of this interdisciplinary research area of multimodality and performance, where the contribution of performing arts such as contemporary dance and theatre, analysed from cognitive and ethnographic perspectives, will hopefully keep growing as seeds in a fertile ground.

In 2015, I was challenged by Isabel Rodrigues and a few other Portuguese scholars working in the domain of gesture studies in

diversified settings, to co-found an association for the study of body movements in communicative contexts, now officially registered as “iGesto.” Its first important event will be the *iGesto International Conference on Gesture and Multimodality* to take place next year in Porto, which plans to promote scientific exchange and research in gesture studies specifically in Southwestern Europe.

Here and now, in Lisbon, with the presented volume, we wish to offer an interdisciplinary perspective on the various domains involved, by bringing together a cognitive linguistic approach to speech, gestures and full-body enactments, and the impact of digital media on dance and performance in general. We believe this is a novel and hybrid territory to be explored in the framework of arts and cognition interactions, and one to which this book can make a timely contribution.

The book is organised in three interconnected sections: **I – Multimodality and Metaphor; II – Hybrid Territories: Dance Documentation, Space, Language and Gestures; and III – Performance and Digital Media.**

The section on **Multimodality and Metaphor** groups together new insights and contributions from conceptual metaphor theory, gesture studies and multimodal communication.

Charles Forceville opens this section, expanding on Lakoff and Johnson’s conceptual metaphor theory by focusing on two specific dimensions of the JOURNEY metaphor: the FORCE and the BALANCE schemas. He demonstrates that the metaphorical potential of these schemas is highly pertinent in animated journey films. He argues that these schemas retain some of their impact in the medium of dance, opening the door to further studies on multimodal metaphor in the performing arts.

Clotilde Almeida and Bibiana de Sousa draw on Forceville (2006, 2008 and 2009) and I. Mittelberg (2008) to aim at a multimodal metaphoric deconstruction of the fundamental issues of rap in the Portuguese Rap scene. Focussing on rappers’ portraits in posters and clips from music videos, they propose an integrative approach to linguistic, pictorial and gestural signs, as well as movement patterns in rap song performances.

Bjørn Tolvig offers a contrastive study by investigating how Danish and Italian speakers express motion in speech and gesture and what these gestures may reveal about linguistic conceptualization. The results show cross-linguistic differences and similarities in speech and gesture patterns, namely that Italian speakers diverge from standard verb-framed patterns and that gestures add to information not readily expressed in speech.

Anja Arts and Joost Schilperoord close this first section with their work on images, multimodal metaphor and communication. They discuss the concept of optimal innovation in language and derive from that discussion a set of structural criteria that have to be met for an expression coded in the verbal modality to count as optimally innovative. They then demonstrate that current approaches to visual innovation have so far not sufficiently dealt with what constitutes a visual optimal innovation.

The second section, **Hybrid Territories: Dance Documentation, Space, Language and Gestures**, builds the bridge between the first and last sections and takes contemporary dance as a guiding thread through expressive movement, technology, discourse and cultural heritage documentation.

Sally-Jane Norman looks at how we construe the contexts in which movements are deemed expressive, to propose that in performing arts, as much as in analytical systems, renderings of movement are obtained by idealizing or abstracting these same contexts. Expressive human movement is examined with respect to the place in which it is staged as art. The need to idealize or simplify place in the context of artistic creation is compared with processes of idealization or simplification of phenomena required for scientific modelling purposes, which may be far more arbitrary than expected.

Sarah Whatley reflects upon the impact of digital technologies on artists' creative strategies and on the viewer's experience of dance. She considers the particular contribution that digital technologies have had on documenting dance *after* the event, but also how digital technologies might intervene *before* or *during* the work's creation, questioning the ontological nature of the dance event itself.

Isabel Rodrigues analyses a section of a contemporary dance performance by choreographer Rui Horta (who has been a case study in the TKB project) to focus on positioning in space, bodily and speech modalities and the enactment of the dimensions of freedom and attachment in face-to-face interactions. The different kinds of spaces created by the dancers, the way they come close or move away from each other, as well as gestures, facial expressions, speech and prosody are thoroughly analysed.

On a mixed approach to contemporary dance and its fluid terminology, Bertha Bermudez proposes that although dance is usually characterized as ephemeral and intangible, there are cognitive aspects of the process of creating dance that can be revealed through the creation and invention of documents. She argues that the role of the lexicons generated by choreographers throughout the trajectory of their work should be

considered for the production of such documents and objects, even if the act of finding terms that represent movements and their qualities is a huge challenge.

The third and last section, **Performance and Digital Media**, brings together innovative works in video annotation, augmented environments, interactive artworks and performative installations, thus illuminating the proximity between the body and the new media available today.

João Gouveia and Carla Fernandes open this section with a description of a video annotation tool that supports the multimodal annotation in real-time of any human activity that can be adequately captured by video. Designated as the “Creation-Tool” and developed in the framework of the TKB project, it was originally designed to facilitate the compositional process of artistic works such as rehearsals of contemporary dance. However, with the recent development of a remote application for this tool, it has become extremely useful for several other fields of work, from gesture studies and anthropology to sports, educational environments and journalism. By allowing the annotation of works in progress, the results obtained can easily become “scores” or traces of bodies in space to be included in an innovative type of “archive of processes” such as the TKB platform.

Stephan Jürgens follows by presenting three approaches to multimodal video annotation in the context of interdisciplinary and collaborative choreographic projects. He clarifies the difference between notations and annotations and explains how the methods proposed in his paper contribute to the existing techniques in the field of multimodal video annotation in dance and the performing arts.

Simon Biggs et al. describe the compositional process of *Bodytext*, a performance seeking insight into the relations between kinaesthetic experience, memory, agency and language. Associating dancers’ movements and speech within an augmented environment employing real-time motion tracking and voice recognition, this performance eventually disrupts the relationship between reader and text.

Paula Varanda argues that if dance as an artistic practice can propel distinctive qualities in media-based interactive artworks, as well as in the relationship with potential audiences, then it is worth reviewing the possible scope of current practice and analysing how characteristics that are fundamental to defining dance as a performing art can be refashioned in new media forms. She foresees that transmedia research and multimodal epistemology may find useful applications if we succeed in bringing the physical and the digital closer via intentional artworks.

The book closes with Carlos Oliveira, who builds on the concept of “Nexus” (by Alfred N. Whitehead) and its emergence by analysing his participation in the *Emergence Room* performance-installation in Berlin. Intrigued by the potential for the emergence of unpredictable patterns in a finite system of reference, he has generated a “document” to explore these possibilities, creating a digital site of memory capable of re-enacting this installation’s characteristic emergence of patterns.

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